

**AMENDMENTS TO THE CLAIMS**

*The listing of claims will replace all prior versions, and listings, of claims in the application.*

**Listing of Claims**

1. (Currently Amended) A receiving apparatus, comprising:

a receiver which receives a signal;

an equalization processing unit which performs equalization processing on the signal received by said receiver;

a selector which selects either the signal received by said receiver or the signal on which the equalization processing has been performed by said equalization processing unit;

a first demodulation unit which demodulates the selected signal according to a first modulation scheme when a modulation scheme of the selected signal is the first modulation scheme; and

a second demodulation unit which demodulates the selected signal according to a second modulation scheme when a modulation scheme of the selected signal is the second modulation scheme whose transmission rate is higher than that of the first modulation scheme,

wherein said equalization processing unit comprises:

a plurality of delay units that store the received signals successively;

a constant storage that stores a plurality of constants that are to be multiplied by the respective signals stored in the plurality of delay units and that are zeros except for ones;

a storage that stores a plurality of coefficients that are to be multiplied by the respective signals stored in the plurality of delays units and that are used for adaptive equalization;

a plurality of multipliers that multiply the constants stored in the constant storage or the plurality of coefficients stored in the storage by the signals stored in the plurality of delay units, associating the constants or the coefficients with the signals; and

a summation unit that sums up multiplication results in the plurality of multipliers, and

wherein if the modulation scheme of the received signal is the first modulation scheme, said selector outputs the plurality of constants stored in the constant storage to the plurality of multipliers to select the signal received by said receiver, and if the modulation scheme of the received signal is the second modulation scheme, said selector outputs the plurality of coefficients stored in the storage to the plurality of multipliers to select the signal on which the equalization processing has been performed.

2. (Original) A receiving apparatus according to claim 1, wherein when said selector selects the signal received by said receiver, said equalization processing unit stops the equalization processing.

3. (Original) A receiving apparatus according to claim 1, wherein a signal to be received by said receiver is a burst signal and the modulation scheme for a header portion of the burst signal is the first modulation scheme, and

wherein said equalization processing unit performs equalization processing on at least part of the header portion of the burst signal, and stops performing the equalization processing on the remaining portion of the burst signal when said selector has selected the signal received by said receiver.

4. (Original) A receiving apparatus according to claim 1, further comprising a measurement unit which measures the quality of the signal received by said receiver when the modulation scheme of the signal received by said receiver is the first modulation signal,

wherein when the measured quality of the signal is worse than a predetermined threshold value, said selector selects the signal on which the equalization processing has been performed by said equalization processing unit although the modulation scheme of the received signal is the first modulation scheme.

5. (Canceled)

6. (Original) A receiving apparatus according to claim 1, wherein said second demodulation unit further includes a residual component processing unit which further performs equalization processing on the selected signal.

7. (Canceled)